

15 JAN 1987

Hoskins Manufacturing Company
170 9th St SE

Joseph Doyle, Chief
IL/IE Unit, RCRA Enforcement

Gerald Phillips, Chief
Program Management Section
Solid Waste and Tanks Unit

Hoskins Manufacturing Company (HMC), New Paris, Indiana has been granted a DIC permit for a Class I injection well for the disposal of hazardous waste. The permit became effective on October 30, 1985. I would like to know if a certification-of-release letter was sent to HMC by the Solid Waste Branch or through a contractor. If so, please send me a photocopy of that letter and any responses received subsequent to its transmittal to the facility.

If you have any questions regarding this request or require any further information, please contact Jonathan Cooper, of my staff, at 886-4464.
Thank you.

bHE-12:Cooper:lr:1/13/87:#27

DATE	1/14/87	1/14/87	1/14/87	1/15/87	1/15/87
	JC	JMB	AP	WEN	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 114 JAN 1987

SUBJECT: Hoskins Manufacturing Company
IND 980-615-678

FROM: Stephanie Lovett Wallace, Acting Chief *SLW*
Permit Unit, UIC Section

TO: Joseph M. Boyle, Chief
IL/IN Unit, RCRA Enforcement

In reponse to your memo of January 7, 1987, attached is a copy of the Hoskins Manufacturing, New Paris, Indiana Underground Injection Control permit #IN-039-1W-0001. Please note that we are preparing to modify this permit. A list of proposed modifications is also attached.

We have not received a final response from Hoskins to the Continuing Releases/Corrective Action requirements contained in Attachment F of this permit. I have spoken with Joe Kain, Hoskins' representative, about this several times and understand that he is preparing a preliminary assessment of continuing releases to submit to us.

Please feel free to call me at 6-1496 if you have any other questions.

Attachment

cc: V. Jones

*Not yet public
noticed 1/14/87*

DRAFT PERMIT MODIFICATIONS FOR HOSKINS MANUFACTURING COMPANY

UIC PERMIT NUMBER IN-039-1W-0001

Permit Part II

- Section (A)(4) This section would be clarified to allow a quarter-inch to half-inch female coupling and valve.
- Section (C)(4) This section would be revised to require that the well be reworked within 180 days to allow the annulus pressure to be maintained at a value exceeding injection pressure. At the time of permit issuance, the existing well was not able to meet this condition.
- Section (C)(5) This section would be revised to allow for a manual, rather than an automatic shut-off system, since technology for an automatic shut-off is not developed to the point of safe operation.
- Section (D)(4) This section would be revised to delete volume from continuous monitoring, since it is a calculated quantity.
- Section (E)(1)
(c),(d),(e),(f) These sections would be revised to delete volume from daily maximum and minimum reporting, since it is a calculated quantity.

Permit Part III

- Attachment F Due to a delay in permit issuance, the deadline for submitting the Preliminary Assessment of Continuing Releases would be changed to forty-five (45) days from the effective date of the permit, rather than a deadline of November 8, 1985.

JAN 7 1987

Hoskins Manufacturing Co.
IND 980 615 672

Joseph M. Royle, Chief
IL/IN Unit, RCRA Enforcement

Stephanie A. Lovett, Acting Chief
Underground Injection Control Section
Permit Unit

The RCRA Enforcement Section is attempting to reconstruct the historical and current compliance status of Hoskins Manufacturing Co., New Paris, Indiana, with RCRA hazardous waste regulations. To assist us in this regard, I am asking that you transmit a complete copy of the Hoskins (IN) UIC permit including all attachments. We are particularly interested in receiving copies of any documents submitted by Hoskins in response to Attachment F regarding continuing releases/corrective action (i.e., descriptions of any solid waste management units at the New Paris facility).

Thank you for your assistance. If you have any questions regarding this request, please call Jonathan Cooper of my staff at 886-4464.

5HE-12:Cooper:lr:1/6/87:#27

				IL/IN				
DATE	IR	gc		JMB	AP			
	1/6/87	1/6/87		1/6/87	1-7-87			



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF.

U.S. ENVIRONMENTAL PROTECTION AGENCY

UNDERGROUND INJECTION CONTROL PERMIT: CLASS I

Permit Number IN-039-1W-0001

EPA ID Number IND980615678

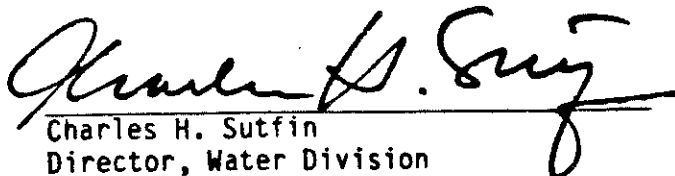
Pursuant to the Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147, Hoskins Manufacturing Company, 600 Buhl Building, Detroit, Michigan is hereby authorized to operate a Class I injection well located in Indiana, Elkhart County, T35N, R6E, Section 21, SW 1/4 into the Mount Simon Sandstone upon the express condition that the permittee meet the restrictions set forth herein.

All references to Title 40 of the Code of Federal Regulations are to all regulations that are in effect on the date that this permit is effective. The following attachments are incorporated into this permit: A, B, C, D, E and F.

This permit shall become effective on October 30, 1985 and shall remain in full force and effect during the life of the permit, unless 1) the statutory provisions of section 3004(f), (g) or (m) of the Resource Conservation and Recovery Act ban or otherwise condition the authorizations in this permit; 2) the Agency promulgates rules pursuant to these sections which withdraw or otherwise condition the authorization in this permit; or 3) this permit is otherwise revoked, terminated, modified or reissued pursuant to 40 CFR §144.39 or §144.40.

This permit and the authorization to inject shall expire at midnight, October 30, 1990, unless terminated.

Signed this 30th day of September, 1985.


Charles H. Sutfin
Director, Water Division

U.S. ENVIRONMENTAL PROTECTION AGENCY
UNDERGROUND INJECTION CONTROL PERMIT

CLASS I HAZARDOUS

PERMIT NUMBER IN-039-1W-0001

HOSKINS MANUFACTURING COMPANY,

ARMADA CORPORATION

signed
9/30/85

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PART I
GENERAL PERMIT COMPLIANCE

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. Notwithstanding any other provisions of this permit, the permittee authorized by this permit shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of injection, annulus or formation fluid into underground sources of drinking water. The objective of this permit is to prevent the introduction of contaminants into underground sources of drinking water if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 142 or may otherwise adversely affect the health of persons. Any underground injection activity not specifically authorized in this permit is prohibited. Compliance with this permit during its term constitutes compliance, for purposes of enforcement, with Part C of the Safe Drinking Water Act (SDWA). Such compliance does not constitute a defense to any action brought under Section 1431 of the SDWA, or any other common or statutory law other than Part C of the SDWA. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

This permit does not relieve owners and operators of hazardous waste injection wells of their obligation to comply with any additional regulations or requirements under the Resource Conservation and Recovery Act (RCRA). This permit does not authorize any above ground generating, handling, storage, treatment or disposal facilities. Such activities must receive authorization under the regulations promulgated pursuant to Part C of the Resource Conservation and Recovery Act.

B. PERMIT ACTIONS

1. Modification, Revocation, Reissuance and Termination.

The Director may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR §144.12, §144.39, and §144.40. Also, the permit is subject to minor modifications for cause as specified in 40 CFR §144.41. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

2. Transfer of Permits. This is not transferable to any person except in accordance with 40 CFR §144.38.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any

circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and §144.5, any information submitted to the United States Environmental Protection Agency (USEPA) pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, USEPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

1. The name and address of the permittee;
 2. Information which deals with the existence, absence or level of contaminants in drinking water.
-

E. DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all applicable Underground Injection Control (UIC) Program regulations and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued in accordance with 40 CFR §144.34. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and

reissuance, modification, or for denial of a permit renewal application. Such noncompliance may also be grounds for enforcement action under the RCRA.

2. Penalties for Violations of Permit Conditions. Any person who violates a permit requirement is subject to civil penalties, fines and other enforcement action under the SDWA and may be subject to such actions pursuant to the RCRA. Any person who willfully violates permit conditions may be subject to criminal prosecution.

3. Continuation of Expiring Permits.

(a) Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least 180 days before this permit expires.

(b) Permit Extensions. The conditions of an expired permit may continue in force in accordance with 5 U.S.C. 558 (c) and 40 CFR §144.37.

(c) Effect. Permits continued under 5 U.S.C. 558 (c) and 40 CFR §144.37 remain fully effective and enforceable.

(d) Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit the Director may choose to do any or all of the following:

(1) Initiate enforcement action based upon the permit which has been continued;

(2) Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operation without a permit;

(3) Issue a new permit under 40 CFR Part 124 with appropriate conditions; or

(4) Take other actions authorized by Underground Injection Control regulations.

(e) State Continuation. A USEPA-issued permit does not continue in force beyond its expiration date under Federal law if at that time a State has primary enforcement responsibility under the SDWA. A State authorized to administer the UIC program may continue either USEPA- or State-issued permits until the effective date of the new permits, if State law allows. Otherwise, the facility or activity is operating without a permit from the time of expiration of the old permit to the effective date of the State-issued new permit. Furthermore, if the State does not continue the USEPA permit upon obtaining primary enforcement responsibility, the permittee must obtain a new State permit or be authorized to inject by State rule or he will be injecting without authorization.

4. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for the permittee in an enforcement action, to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

7. Duty to Provide Information. The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. Inspection and Entry. The permittee shall allow the Director or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

(a) Enter, at reasonable times, upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;

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- (b) Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any facilities, equipment or operations regulated or required under this permit.

9. Records.

- (a) The permittee shall retain records and all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit for a period of at least five (5) years from the date of the sample, measurement or report, unless these materials are submitted to the Director as part of reporting requirements under this permit.
- (b) The permittee shall maintain records of all data required to complete the permit application form for this permit and any supplemental information submitted under 40 CFR §144.27, §144.28, and §144.31 for a period of at least five (5) years from the date the application was signed.

(c) The permittee shall retain records concerning the nature and composition of all injected fluids until three (3) years after the completion of plugging and abandonment.

(d) The retention period specified in Permit Condition E 9 (a) through (c) above may be extended by request of the Director at any time. The permittee shall continue to retain records after the retention period specified in Permit Condition E 9 (a) through (c) or any requested extension thereof expires unless he delivers the records to the Director or obtains written approval from the Director to discard the records.

(e) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) A precise description of both sampling methodology and the handling of samples;

(4) The date(s) analyses were performed;

(5) The names of individual(s) who performed the analyses;

(6) The analytical techniques or methods used; and

(7) The results of such analyses.

10. Monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring results shall be reported at the intervals contained in Part II (E 1-3) and in Attachment E of this permit.

(a) Monitoring of the nature of injected fluids shall comply with applicable analytical methods cited and described in Table I of 40 CFR §136.3 or in Appendix III of 40 CFR Part 261 or in certain circumstances by other methods that have been approved by the Director.

(b) Sampling and analysis shall comply with the specifications of the Waste Analysis Plan required in Part II (D 3) of this permit.

11. Signatory Requirements. All reports or other information, required to be submitted by this permit or requested by the Director shall be signed and certified in accordance with 40 CFR §144.32.

12. Reporting Requirements.

(a) Planned Changes. The permittee shall give written notice to the Director as soon as possible, of any planned physical alterations or additions to the permitted facility, other than minor repair/replacement maintenance activities.

(b) Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule to this permit shall be submitted no later than thirty (30) working days following each schedule date.

(d) Twenty-four Hour Reporting.

(1) The permittee shall report to the Director any permit noncompliance which may endanger health or the environment. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. Such reports shall include, but not be limited to the following information:

(i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.

(ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between underground sources of drinking water.

(2) A written submission shall also be provided within five (5) working days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to

continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

(e) Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition E 12(d)(2) above.

(f) Other Information. When the permittee becomes aware that he failed to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to the Director, the permittee shall submit such facts or information within ten (10) working days.

(g) Report on Permit Review. Within thirty (30) working days of receipt of this permit, the permittee shall report to the Director that he has read and is personally familiar with all terms and conditions of this permit.

(h) Reporting Requirements Under the RCRA. The permittee shall also comply with applicable federal regulations under the Resource Conservation and Recovery Act. These include, but are not limited to, 40 CFR §264.117, §264.119, §264.120 and the General Facility Standards described in §264 Subpart B (§264.10 through §264.18).

F. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment. The permittee shall notify the Director no later than forty-five (45) working days before conversion or abandonment of the well.
2. Plugging and Abandonment. The permittee shall plug and abandon the well consistent with 40 CFR §146.10, as provided for in the plugging and abandonment plan contained in Attachment A of this permit. Within sixty (60) working days after plugging a well, or at the time of the next quarterly report (whichever is shorter), the permittee shall submit a report to the Director. The report shall be certified as accurate by the person who performed the plugging operation, and shall consist of either:
 - (a) A statement that the well was plugged in accordance with the plan previously submitted to the Director; or
 - (b) If the actual plugging differed from the approved plan, a statement defining the actual plugging and explaining why the Director should approve such deviation. Any deviation from a previously approved plan which may endanger underground sources of drinking water is cause for the Director to require the operator to replug the well.
3. Inactive Wells. After cessation of injection for two (2) years the permittee shall plug and abandon the well in accordance with the plan and 40 CFR §144.52 (a)(6) unless the permittee has:

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(a) Provided notice to the Director; and

(b) Described actions or procedures, which are deemed satisfactory by the Director, that the permittee will take to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived, in writing, by the Director.

4. Revision of Plugging and Abandonment Plan. If the plugging and abandonment plan should change, a revised plan shall be submitted to the Director for approval at the time of the next monthly report. Once approved, the revised plugging and abandonment plan will replace the original plan as part of this permit.

G. MECHANICAL INTEGRITY

1. Standards. The injection well must have and maintain mechanical integrity consistent with 40 CFR §146.8.

2. Subsequent Mechanical Integrity Demonstrations. A demonstration of mechanical integrity in accordance with 40 CFR §146.8 shall be made biennially from the date of the last approved demonstration. Mechanical integrity shall also be demonstrated any time the tubing is removed from the well, the packer is reset, or loss of mechanical integrity becomes evident during operation. For workovers involving no modification

to the cement or completed interval, mechanical integrity shall be demonstrated using a test outlined in 40 CFR §146.8 (b). The permittee shall notify the Director of his intent to demonstrate mechanical integrity at least thirty (30) working days prior to such demonstration. The permittee shall report the results of a mechanical integrity demonstration within ninety (90) working days after completion thereof.

3. Gauges. All gauges used in mechanical integrity demonstrations shall be calibrated according to the procedures of The National Bureau of Standards to an accuracy of not less than one-half percent (0.5%) of full scale, initially and annually thereafter. A copy of the calibration certificate shall be submitted to the Director or his representative at the time of demonstration.

4. Loss of Mechanical Integrity. If the permittee or the Director finds that the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity as defined by 40 CFR §146.8 becomes evident during operation, the permittee shall halt the operation immediately and shall not resume it until the Director gives approval to recommence injection.

5. Mechanical Integrity Request from Director. The Director may by written notice require the permittee to demonstrate mechanical integrity at any time.

H. FINANCIAL RESPONSIBILITY

1. Cost Estimate for Plugging and Abandonment. The permittee estimates the present cost of plugging and abandonment of the permitted well as \$20,000 to \$24,000, according to the plan contained in Attachment A.
2. Financial Responsibility. The permittee is required to maintain responsibility and resources to close, plug, and abandon the underground injection operation in a manner consistent with 40 CFR §144.52 (a)(7) and 40 CFR §144.60 through §144.70. The financial assurance mechanism is provided in Attachment D of this permit.

(a) Pursuant to 40 CFR §144.62(a), the permittee must maintain a written cost estimate, in current dollars, for the plugging and abandonment plan as specified in 40 CFR §146.10. The plugging and abandonment cost estimate at any point in the life of the facility operation must equal the maximum cost of plugging and abandonment at that time.

(b) Pursuant to 40 CFR §144.62(b), the permittee must adjust the cost estimate of plugging and abandonment for inflation within thirty (30) working days after each anniversary of the first estimate. The inflation factor is prescribed in 40 CFR §144.62(b).

(c) The permittee must revise the plugging and abandonment cost estimate whenever a change in the plugging and abandonment plan increases the cost of plugging and abandonment. The revised plugging and abandonment estimate must be adjusted for inflation as specified above in Permit Condition H 2 (b) above.

(d) If the revised plugging and abandonment estimate exceeds the current amount of the financial assurance mechanism, the permittee shall submit a revised mechanism to cover the increased cost within thirty (30) working days after the revision specified in Permit Conditions H 2 (b) and (c) above.

(e) The permittee must keep on file at the facility a copy of the latest plugging and abandonment cost estimate prepared in accordance with 40 CFR §144.62, during the operating life of the facility. Said estimate shall be available for inspection in accordance with the procedures in Permit Condition E 8 (b) above.

3. Insolvency. The permittee must notify the Director within ten (10) business days of any of the following events:

(a) The bankruptcy of the trustee or issuing institution of the financial mechanism, or

(b) Suspension or revocation of the authority of the trustee institution to act as trustee, or

(c) The institution issuing the financial mechanism losing its authority to issue such an instrument.

4. Notification. An owner or operator must notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor of a corporate guarantee must make such a notification if he

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is named as debtor, as required under the terms of the guarantee.

5. Establishing Other Coverage. The owner or operator must establish other financial assurance or liability coverage acceptable to the Director, within sixty (60) working days of the occurrence of the events in Permit Condition H 3 or H 4 above.

I. CORRECTIVE ACTION

1. Compliance. The permittee shall comply with the approved corrective action plan contained in Attachment B of this permit and with 40 CFR §144.55 and §146.7.
2. Injection Commencement. The permittee shall not commence injection in a well under this permit until all corrective action has been taken in accordance with the plan contained in Attachment B of this permit, and in accordance with 40 CFR §144.55.

J. CORRECTIVE ACTION UNDER §3004 (u) OF THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Continuing Releases at Permitted Facilities:

The permittee shall institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit, regardless of the time at which waste was placed in the unit. The schedules for compliance for completing such corrective action are contained in Attachment F.

PART II

WELL SPECIFIC CONDITIONS FOR UIC PERMITS

A. CONSTRUCTION

1. Siting [§146.12 (a)].

The injection well shall inject only into a formation which is beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water.

2. Casing and Cementing [§146.12(b)].

Notwithstanding any other provisions of this permit, the permittee shall maintain casing and cement in the well in such a manner as to prevent the movement of fluids into or between underground sources of drinking water for the expected life of the well. The casing and cement used in the construction of the well are shown in Attachment C of this permit. Any change shall be submitted by the applicant for the approval of the Director before installation.

3. Tubing and Packer Specifications [§146.12(c)].

Injection shall only take place through tubing with a packer set within the casing at the bottom of the long string casing immediately above the injection zone. Tubing and packer shall be designed for the expected service. The tubing and packer currently used in the well are represented in engineering drawings contained in Attachment C of this permit. Any changes shall be submitted by the applicant for the approval of the Director before installation.

4. Wellhead Specifications [§144.51(i)(4)].

A quarter-inch (1/4") female coupling and needle valve shall be

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installed on the wellhead, to be used for independent injection pressure readings.

B. FORMATION DATA [§144.52(b)(1)]

If the limit of the injection pressure as specified in Permit Condition Part II C 2 is reached, or at the time of any well rework, the applicant shall conduct formation testing to provide the following information:

1. The permeability capacity (transmissibility) of the injection zone;
2. The formation or reservoir pressure; and
3. The skin effect.

The results of formation testing shall be submitted to the USEPA with the next monthly report.

C. OPERATIONS

1. Injection Formation. Injection shall be limited to the Mount Simon Sandstone in the subsurface interval between 3406 feet and 4120 feet, measured from ground level.

2. Injection Pressure Limitation [§146.13(a)(1)].

Except during stimulation, injection pressure at the wellhead shall not exceed a maximum which shall be calculated so as to assure that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the injection zone.

In no case, shall injection pressure initiate fractures in the confining zone or cause the movement of injection or formation fluids into an underground source of drinking water. The injection pressure and injected fluid shall be limited and monitored as specified in Attachment E.

3. Additional Injection Limitation [§146.13(a)(2)].

Injection between the outermost casing protecting underground sources of drinking water and the well bore is prohibited.

4. Annulus Fluid and Pressure [§146.13(a)(3)].

The annulus between the tubing and the long string casing shall be filled with a fluid approved by the Director. The fluid currently maintained in the annulus is water with potassium chloride and an oxygen scavenger. Any change in the annulus fluid shall be submitted by the applicant for the approval of the Director before replacement. The pressure on the annulus shall be higher than the injection pressure throughout the entire length of the tubing, at all times.

5. Automatic Warning and Shut-Off System. [§146.13 (b)(2)].

Within one (1) year of the effective date of this permit, the permittee shall install, continuously operate and maintain an automatic warning and shut-off system to stop injection in the following situations:

-22-

- (a) Significant pressure change in the annulus;
- (b) Injection pressure reaches 1164 psia;
- (c) Significant change in the injection/annulus pressure differential.

Plans and specifications for the warning and shut-off system shall be submitted to the Director for approval prior to installation.

D. MONITORING

1. Monitoring Requirements [§144.51 (j)(1); §144.52(a)(5)].

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the fluid to be analyzed shall be one described in Appendix I of 40 CFR Part 261 or an equivalent method. The sampling location shall be at the valve and hose after the injection pump. The permittee shall identify the types of the tests and methods used to generate the monitoring data in the Waste Analysis Plan required in Permit Condition Part II D 3 below. The monitoring program shall conform to the one described in Attachment E on pages 44 and 49-51 of this permit and with the approved Waste Analysis Plan.

2. Injection Fluid Analysis [§146.13(b)(1); §144.52(a)(5)].

Monitoring of the nature of injected fluids shall comply with applicable analytical methods cited and described in Table I of 40 CFR §136.3 or in Appendix III of 40 CFR Part 261 or in certain circumstances by other methods that have been approved by the Director. Until the Waste Analysis Plan required in Permit Condition Part II D 3 has been approved, injection fluids shall be analyzed monthly for the parameters specified in Attachment E on page 44. Initial analyses

of the injection fluid are contained in Attachment E on pages 45-48.

3. Waste Analysis Plan [§144.52 (a)(5); §264.13 (b)].

The permittee shall develop and follow a written Waste Analysis Plan which describes the procedures which will be carried out to comply with Permit Conditions Part II D 1 and D 2 above. This plan shall be submitted to the Director for approval within forty-five (45) working days of the receipt of this permit and a copy of the plan shall be kept at the facility. At a minimum, the plan must specify:

(a) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters;

(b) The test methods which will be used to test for these parameters; and

(c) The sampling method which will be used to obtain a representative sample of the waste to be analyzed and the frequency of sampling and analysis for each parameter.

4. Continuous Monitoring Devices [§146.13(b)(2)].

Continuous monitoring devices shall be installed and used to monitor injection pressure, flow rate and volume, and the pressure on the annulus between the tubing and the long string of casing. The monitoring results shall be submitted to the Director as specified in Permit Condition Part II E below and in Attachment E.

5. Monitoring Wells [§146.13].

The permittee shall submit a ground water monitoring plan to detect any migration of fluids into and pressure build-up in the underground sources of drinking water, including the parameters to be measured and the frequency of monitoring, no later than forty-five (45) working days after the effective date of this permit. The elements of an acceptable ground water monitoring plan are set forth in Attachment E of this permit. The time for submission of this plan may be extended for good cause if the Director receives a request before the expiration of the forty-five (45) day period and said request demonstrates the need for an extension. The permittee may request waiver of this requirement within forty-five (45) working days of the effective date of this permit if he can demonstrate that there is no potential for fluid movement above the confining zone caused by injection activity or that underground sources of drinking water are completely absent within the area of review. Upon approval of the ground water monitoring plan, or waiver of the ground water monitoring requirement, the plan or waiver shall be incorporated into this permit. All extensions or waivers granted must be in writing.

E. REPORTING REQUIREMENTS [§146.13(c)]

The permittee shall submit all required reports to the Director
at:

United States Environmental Protection Agency
Region V
230 South Dearborn Street, 5WD
Chicago, Illinois 60604
ATTN: UIC Section

1. Monthly Reports.

The permittee shall submit monthly reports of the following information:

- (a) Results of the injection fluid analyses specified in Permit Condition Part II D 2.
- (b) Daily and monthly average values for injection pressure, flow rate and volume, and annular pressure.
- (c) Daily maximum and minimum values for injection pressure with the corresponding values for flow rate and volume, and annular pressure.
- (d) Daily maximum and minimum values for flow rate and volume with the corresponding values for injection pressure and annular pressure.
- (e) Daily maximum and minimum values for annular pressure with the corresponding values for injection pressure and flow rate and volume.
- (f) A graph containing values for annular pressure, injection pressure, and flow rate and volume recorded at six (6) hour intervals. This information is to be displayed on a single graph, with annular pressure, injection pressure, and flow rate and volume described in individual contrasting colors.

2. Quarterly Reports.

If monitoring wells are installed, results of monitoring as specified in Permit Condition Part II D 5 shall be submitted on a quarterly basis.

3. Reports on Well Tests and Workovers [§146.13 (c)(2)].

In the first quarterly report after the activity, the permittee shall report to the Director the results of the following:

- (a) Demonstrations of mechanical integrity;
- (b) Other tests required by this permit;
- (c) Any well workover.

F. CLASS I HAZARDOUS WASTE MANIFEST

Permittees injecting hazardous wastes which are accompanied by a manifest or delivery document shall comply with the requirements of 40 CFR §144.14.

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PART III
PERMIT ATTACHMENTS

-28-

ATTACHMENT A
PLUGGING AND ABANDONMENT PLAN

CONTENTSPAGE NUMBERS

Closure Plan
Plugging and Abandonment Plan

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CLOSURE PLAN
PLUG AND ABANDONMENT PROCEDURE FOR HOSKINS WELL NO. 1

1. Move in and rig up.
2. Pump 100 bbls of 10 lb/gal. brine.
3. Dismantle wellhead and mount blowout preventor.
4. Remove the 2 7/8" O.D. injection tubing. If packer will not unseat, cut the tubing with a tubing charge immediately above the packer. Remove and decontaminate the tubing as required.
5. Set bridge plug at the bottom of the long string casing.
6. Balance Class "H" in multiple stages from the top of bridge plug to surface.
7. Rig down and move out.
8. Cut off wellhead and casing 3' below ground level and weld steel plate on top of casing. Steel plate should be inscribed with Serial No. and date of plugging. Federal and State representatives will witness the plugging and will sign the plug and abandonment form.

COST OF CLOSURE

A cost of closure estimate for the above general plugging and abandonment plan is approximately \$20,000 - 24,000 (1985 Dollars).



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

IN-039-1W-0001

PLUGGING AND ABANDONMENT PLAN

NAME AND ADDRESS OF FACILITY
Hoskins Manufacturing Company
71105 County Road 23
New Paris, Indiana 46553

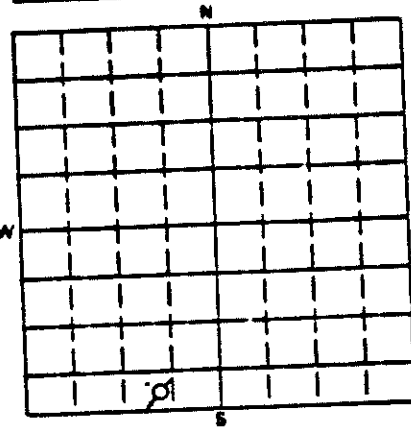
NAME AND ADDRESS OF OWNER/OPERATOR
Hoskins Manufacturing Company
600 BUHL BUILDING
Detroit, Michigan 48226

STATE
IN

COUNTY
Elkhart

PERMIT NUMBER
IN-039-1W-0001

LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT - 840 ACRES



SURFACE LOCATION DESCRIPTION
1/4 OF SE 1/4 OF SW 1/4 SECTION 21 TOWNSHIP 35N RANGE 6E

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface
Location 2.95 ft. from (N/S) S Line of quarter section
and 1850 ft. from (E/W) W Line of quarter section

TYPE OF AUTHORIZATION

- ☐ Individual Permit
☐ Area Permit
☒ Rul.

Number of Wells 1

WELL ACTIVITY

- ☒ CLASS I
☐ CLASS II
☐ Brine Disposal
☐ Enhanced Recovery
☐ Hydrocarbon Storage
☐ CLASS III

Hoskins Manufacturing

Lease Name Company

Well Number 1

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
13 3/8"	48.0		61'	
8 5/8"	24.0		412'	
5 1/2"	17.0		3418'	

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☒ The Balance Method
☐ The Dump Bailer Method
☐ The Two-Plug Method
☒ Other Staging

CEMENTING TO PLUG AND ABANDON DATA

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)	5 1/2"						
Depth to Bottom of Tubing or Drill Pipe (ft.)	3418'						
Sacks of Cement To Be Used (each plug)	473						
Slurry Volume To Be Pumped (cu. ft.)	446+						
Calculated Top of Plug (ft.)	3' below grade						
Measured Top of Plug (if tagged ft.)	3'						
Slurry Wt. (Lb./Gal.)	15.4						
Type Cement or Other Material (Class III)	Class H						

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (If any)

From	To	From	To
3418	4132		

Estimated Cost to Plug Wells

\$20,000 - \$24,000/well

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE (Please type or print)
John C. Lachman, Vice President
General Manager

SIGNATURE

DATE SIGNED

February 18, 1985

ATTACHMENT B
CONTINGENCY PLANS

CONTENTS

PAGE NUMBERS

Corrective Action Plan
Contingency Plans

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CORRECTIVE ACTION PLAN

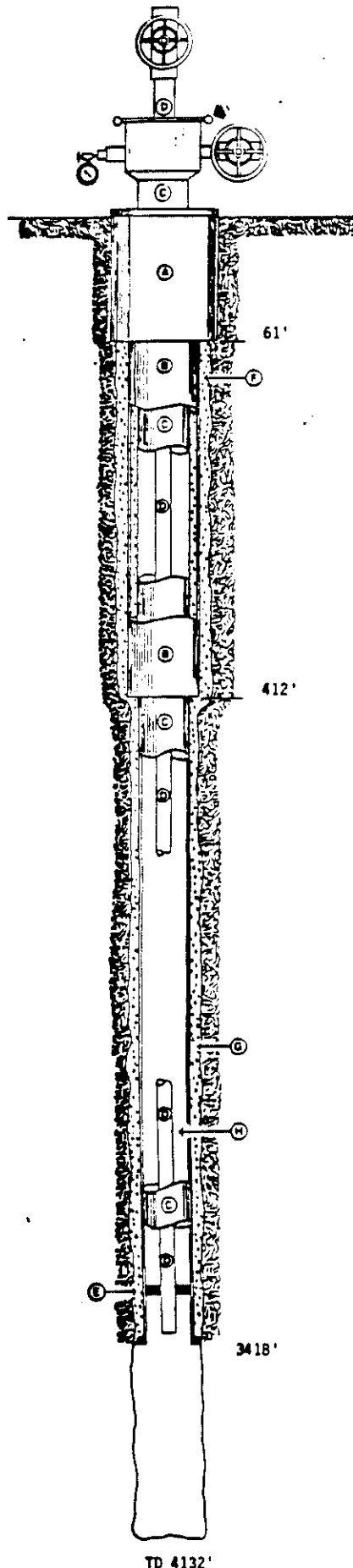
The corrective action procedures to be followed by HMC should upward fluid migration occur through the confining layer via any future or currently unknown well include the following:

1. HMC waste disposal well No. 1 will be shut in.
2. The US EPA, Region V and Indiana State Board of Health will be notified.
3. Following well shut in, the Neutralized Waste Pickle Liquor (NWPL) will be shipped for offsite treatment and disposal.
4. A contingency plan will be prepared as follows:
 - a. Locate well and identify present operator or owner, if any.
 - b. Identify mode of failure.
 - c. Prepare remedial plan outlining course of action.
 - d. The remedial plan will be submitted to the US EPA, Region V for approval.
 - e. Upon authorization, the plan will be implemented.

CONTINGENCY PLANS

1. Routine investigative procedures will be performed on the injection well as needed, but not less frequently than every five years. All work will be supervised and documented by Resources Services, Inc. and all pertinent data forwarded to the interested agencies.
2. If a workover is performed on the well, all work and logs will be forwarded to the various agencies.
3. During the period of time required for a well workover, the contingency plans of the plant would include the following:
 - a. If the well work covers only a relatively short period of time, the waste acid generated during this period of time can be held in storage at the plant.
 - b. If the well work was more involved requiring a longer period of time, some of the pickling operations could be shifted to one of the other plants.
 - c. If required, waste acid could be removed from the plant via commercial waste treatment facility vehicles.

ATTACHMENT C
CONSTRUCTION DETAILS



A. 13 3/8" O.D., 48 LB/FT, H-40 CONDUCTOR CASING
SET AT 61' AND CEMENTED TO THE SURFACE.

B. 8 5/8" O.D. 24 LB/FT, K-55, ST&C SURFACE CASING
SET AT 412' AND CEMENTED TO THE SURFACE.

C. 5 1/2" O.D. 17 LB/FT, K-55 LT&C LONG STRING CASING
SET AT 3418' AND CEMENTED TO THE SURFACE.

D. 2 7/8" O.D. 6.5 LB/FT, J-55, EUE ERW INJECTION TUBING
ATTACHED TO TOP OF PACKER. TUBING TALLY DEPTH IS 3382'.

E. BAKER AL-2 LOC-SET PACKER SET AT 3366' W.L. (RAT 4/8/84).

F. 280 SACKS CLASS A CEMENT + 3% CaCl₂ CEMENTED TO THE
SURFACE.

G. 390 SACKS CLASS A CEMENT,
225 SACKS SPECIAL CEMENT,
200 SACKS LIGHT CEMENT,
+ 18% SALT BLEND + CFR-2 CEMENTED TO THE SURFACE
IN TWO STAGES, D.V. PACKER COLLAR AT 1800'.

H. INHIBITED ANNULUS FLUID.

NOTE: ALL MEASUREMENTS TAKEN FROM ROTARY KELLY BUSHING
(RKB), RKB=12', EXCEPT FOR THE 2 7/8" TUBING, RKB=11'.

1. JOY, TYPE "SR" SERIES TUBING HEAD.

ATTACHMENT D
FINANCIAL ASSURANCE MECHANISM

CONTENTSPAGE NUMBERS

Schedule for Period Updating
Chief Financial Officer's Letter
Auditors' Report
Auditors' Verification

37
38-40
41
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SCHEDULE FOR PERIODIC UPDATING OF CORPORATE GUARANTEE FOR PLUGGING AND
ABANDONMENT [§144.63 (f)(5)]

Within ninety (90) days after the close of each fiscal year, the permittee shall submit updated financial assurance information to support the corporate guarantee for plugging and abandonment provided in this permit. The information submitted to the Director must consist of the following three items, as specified in paragraph (f)(3) of 40 CFR §144.63 (Subpart F):

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in §144.70(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

Armada Corporation

600 Buhl Building • Detroit, MI 48226 • Phone 313-963-3100

Lowell Robinson, Jr. / Vice President - Finance

January 9, 1985

Mr. Valdas V. Adamkus
Regional Administrator
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604

Gentlemen:

I am the chief financial officer of Armada Corporation 630 Buhl Building, Detroit, Michigan 48226. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in Subpart F of 40 CFR Part 144.

1. This firm is the owner or operator of the following injection wells for which financial assurance for plugging and abandonment is demonstrated through the financial test specified in Subpart F of 40 CFR Part 144. The current plugging and abandonment cost estimate covered by the test is shown for each injection well: None.
 2. This firm guarantees, through the corporate guarantee specified in Subpart F of 40 CFR Part 144, the plugging and abandonment of the following injection wells owned or operated by subsidiaries of this firm. The current cost estimate for plugging and abandonment so guaranteed is shown for each injection well:
 - (a) Hoskins Manufacturing Company
New Paris, Indiana
EPA I.D.No. IND 980615678
Estimated Cost of Plugging and Abandonment \$ 24,000
 - (b) Hoskins Manufacturing Company
Mio, Michigan
EPA I.D.No. MIO 980567838
Estimated Cost of Plugging and Abandonment 22,000*
- * Surety Bond of \$25,000 has been posted with Michigan Dept. of Natural Resources in connection with Mio well

\$ 46,000

3. In States where EPA is not administering the financial requirements of Subpart F of 40 CFR 144, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the plugging and abandonment of the following injection wells through the use of a test equivalent or substantially equivalent to the financial test specified in Subpart F of 40 CFR 144. The current plugging and abandonment cost estimate covered by such a test is shown for each injection well: None.
4. This firm is the owner or operator of the following injection wells for which financial assurance for plugging and abandonment is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Subpart F of 40 CFR 144 or equivalent or substantially equivalent State mechanisms. The current plugging and abandonment cost estimate not covered by such financial assurance is shown for each injection well: None.

This firm is required to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on December 31. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended December 31, 1983.

ALTERNATIVE I

1. (a)	Current plugging and abandonment cost.....	\$46,000
	(b) Sum of the Company's financial responsibilities under 40 CFR 264 and 265, Subpart H, currently met using the financial test or corporate guarantee.....	41,500
	(c) Total of lines a and b.....	87,500
*2.	Total liabilities.....	24,149,000
*3.	Tangible net worth.....	29,472,000
*4.	Net worth.....	30,725,000
*5.	Current assets.....	32,024,000
*6.	Current liabilities.....	13,086,000

- *7. Net working capital (line 5 minus line 6).....18,938,000
 *8. The sum of net income plus depreciation
 depletion and amortization..... 2,540,000
 *9. Total assets in U.S. (required only if less
 than 90% of firm's assets are located in U.S.)....

YES

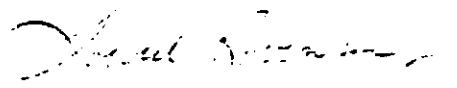
NO

10. Is line 3 at least \$10 million..... X
 11. Is line 3 at least 6 times
 line 1 (c)?..... X
 12. Is line 7 at least 6 times
 line 1 (c)?..... X
 *13. Are at least 90% of firm's
 assets located in the U.S.?
 If not, complete line 14..... X
 14. Is line 9 at least 6 times
 line 1 (c)?.....N/A
 15. Is line 2 divided by line
 4 less than 2.0?..... X
 16. Is line 8 divided by line
 2 greater than 0.1?..... X
 17. Is line 5 divided by line
 6 greater than 1.5?..... X

I hereby certify that the wording of this letter is identical
 to the wording specified in 40 CFR 144.70(f) as such regulations
 were constituted on the date shown immediately below.

Very truly yours,

ARMADA CORPORATION

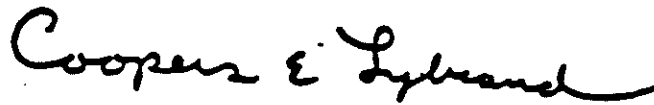

 Lowell Robinson, Jr.
 Vice President-Finance
 January 9, 1985

Auditors' Report

To the Board of Directors
and Shareholders of Armada Corporation:

We have examined the consolidated balance sheet of Armada Corporation and Subsidiaries as of December 31, 1983 and 1982, and the related consolidated statements of income, shareholders' equity and changes in financial position for the years ended December 31, 1983, 1982 and 1981. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the consolidated financial position of Armada Corporation and Subsidiaries at December 31, 1983 and 1982, and the consolidated results of operations and changes in financial position for the years ended December 31, 1983, 1982 and 1981 in conformity with generally accepted accounting principles applied on a consistent basis.



Coopers & Lybrand
400 Renaissance Center
Detroit, Michigan 48243
(313) 446-7100
March 16, 1984

Coopers
& Lybrand

and public accountants

400 Renaissance Center
Detroit, Michigan 48243

in principal areas of the world

telephone (313) 446-7100
twx 810-221-1690
cables CoLybrand

RE ARMADA CORPORATION -
AUDITOR'S VERIFICATION OF
CHIEF FINANCIAL OFFICER'S LETTER

Mr. Gregory L. Parker
Environmental Protection Agency
230 South Dearborn St.
Chicago, IL 60604

We have examined the financial officer's letter submitted by Armada Corporation to the Environmental Protection Agency, dated January 9, 1985.

The financial information numbered 2 through 8, under Alternative I corresponds to the data contained in the company's audited financial statements for the fiscal year ended December 31, 1983. As a result of our examination, we verify that the aforementioned financial information and calculations numbered 9 through 17 contained under Alternative I in the financial officer's letter are fair representations.

Coopers & Lybrand

Gregory G. Nelson

February 21, 1985

Gregory G. Nelson

Partner

ATTACHMENT E
OPERATING, MONITORING, AND REPORTING

CONTENTS

PAGE NUMBERS

Operating, Monitoring and Reporting Requirements
Wastewater Analyses
Ground Water Monitoring Plan

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45-48
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OPERATING, MONITORING AND REPORTING REQUIREMENTS

<u>Characteristic</u>	<u>LIMITATION</u>	<u>MINIMUM MONITORING REQ.</u>	<u>MINIMUM REPORTING REQUIREMENTS</u>
	<u>Maximum</u>	<u>Freq.</u>	
Injection Pressure	1164 psia	continuous	monthly
Annulus Pressure		continuous	monthly
Flow Rate		continuous	monthly
Cumulative Volume		continuous	monthly
Specific Gravity		weekly	monthly
***Chemical Composition of Injected Fluid		monthly	monthly
Total Dissolved Solids		monthly	monthly
pH		monthly	monthly
Total Suspended Solids		monthly	monthly

***Chemical composition shall include, but not be limited to, the following:
Chloride, Sodium, Nickel, Chromium, Copper, Bicarbonate, and Carbonate.

Phone 287-3367 (Area 219) -- 2215 South Main Street -- Post Office Box 2829 -- South Bend, Indiana 46680

REPORT OF ANALYSIS

SAMPLE HISTORY:

Plant Hoskins Mfg.

Source of sample Deep Well samples

Address New Paris, IN.

Sampled by D. Craker

Date sampled 12-11-84

REPORT OF ANALYSIS

Hardness	as mg/l CaCO ₃	_____	Suspended solids	<u>95.2</u>	mg/l
Phenolphthalein Alkalinity	as mg/l CaCO ₃	_____	Specific Conductance	_____	micro Mhos
Methyl Orange Alkalinity	as mg/l CaCO ₃	_____	Total Dissolved Solids	<u>104,000</u>	mg/l
Chlorides	as mg/l NaCl	<u>65,459</u>	Turbidity	_____	
pH		<u>9.9</u>	Total Solids	_____	Mg/l
Sulfide, S	mg/l	_____	Dissolved Oxygen	_____	mg/l
Free Carbon Dioxide	mg/l	_____	Color	_____	
COD	mg/l	_____	B.O.D. 5 day	_____	mg/l
Aluminum, Al	mg/l	_____		_____	_____
Ammonia, N	mg/l	_____	Bicarbonate, HCO ₃	_____	_____
Cadmium, Cd	mg/l	_____	Carbonate, CO ₃	_____	_____
Calcium, Ca	mg/l	_____	Cyanide, CN	_____	_____
Chromium, Hexavalent, Cr	mg/l	_____	Fluoride, F	_____	_____
Chromium, Total, Cr	mg/l	<u>24 mg/l</u>	Hydroxide, OH	_____	_____
Copper, Cu	mg/l	_____	Nitrate, N	_____	_____
Iron, Fe	mg/l	_____	Nitrite, N	_____	_____
Magnesium, Mg	mg/l	_____	Organic Nitrogen, N	_____	_____
Manganese, Mn	mg/l	_____	Phenol	_____	_____
Oil and Grease	mg/l	_____	Ortho Phosphate, P	_____	_____
Potassium, K	mg/l	_____	Total Phosphate, P	_____	_____
Sodium, Na	mg/l	<u>31,900 mg/l</u>	Silica, SiO ₂	_____	_____
Zinc, Zn	mg/l	_____	Sulfate, SO ₄	_____	_____
Specific Gravity		<u>1.061</u>	Sulfite, SO ₃	_____	_____
Nickel, Ni	mg/l	<u>10.3 mg/l</u>	Surfactants	_____	_____

Date 1-18-85

Laboratory Number 850118-1

By J.E.G. III

All tests in accordance with APHA Std. Methods, ASTM Stds. or WQO Methods

REPORT OF ANALYSIS

SAMPLE HISTORY:

Plant Moskins Mfg.
Address New Paris, IN.
Date sampled 1/14/85

Source of sample Deep Well sample

Sampled by D. Craker

REPORT OF ANALYSIS

Hardness	as mg/l CaCO ₃			Suspended solids	39.6	mg/l
Phenolphthalein Alkalinity	as mg/l CaCO ₃			Specific Conductance		micro Mhos
Methyl Orange Alkalinity	as mg/l CaCO ₃			Total Dissolved Solids	43.600	mg/l
Chlorides	as mg/l NaCl	27.292		Turbidity		
pH		9.7		Total Solids		Mg/l
Sulfide, S	mg/l			Dissolved Oxygen		mg/l
Free Carbon Dioxide	mg/l			Color		
COD	mg/l			B.O.D. 5 day		mg/l
Aluminum, Al	mg/l				open	%
Ammonia, N				Bicarbonate, HCO ₃		
Cadmium, Cd				Carbonate, CO ₃		
Calcium, Ca				Cyanide, CN		
Chromium, Hexavalent, Cr				Fluoride, F		
Chromium, Total, Cr		5.3	mg/l	Hydroxide, OH		
Copper, Cu				Nitrate, N		
Iron, Fe				Nitrite, N		
Magnesium, Mg				Organic Nitrogen, N		
Manganese, Mn				Phenol		
Oil and Grease				Ortho Phosphate, P		
Potassium, K				Total Phosphate, P		
Sodium, Na		12.300	mg/l	Silica, SiO ₂		
Zinc, Zn				Sulfate, SO ₄		
Specific gravity		1.022		Sulfite, SO ₃		
Nickel, Ni		12.1	mg/l	Surfactants		

Date 1/18/84

Laboratory Number 840118-2

By J.E.G. III

All tests in accordance with APHA Std. Methods, ASTM Stds. or WQO Methods

Phone 287-3397 (Area 219) --- 2215 South Main Street --- Post Office Box 2829 --- South Bend, Indiana 46680

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REPORT OF ANALYSIS

SAMPLE HISTORY:

Client Hoskins Mfg.

Address New Paris, IN.

Date sampled 11/13/84

Source of sample Deep Well, 11/13/84

Sampled by Themselves

REPORT OF ANALYSIS

Hardness

as mg/l CaCO₃ _____

Suspended solids

105 mg/l

Phenolphthalein Alkalinity

as mg/l CaCO₃ _____

Specific Conductance

_____ micro Mhos

Methyl Orange Alkalinity

as mg/l CaCO₃ _____

Total Dissolved Solids

67,200 mg/l

Chlorides

as mg/l NaCl 34,200

Turbidity

pH

10.3

Total Solids

_____ Mg/l

Sulfide, S

mg/l _____

Dissolved Oxygen

_____ mg/l

Free Carbon Dioxide

mg/l _____

Color

COD

mg/l _____
mg/l _____

B.O.D. 5 day

_____ mg/l
_____ open _____ %

Aluminum, Al

Bicarbonates, HCO₃

Ammonia, N

Carbonate, CO₃

Cadmium, Cd

Cyanide, CN

Calcium, Ca

Fluoride, F

Chromium, Hexavalent, Cr

Hydroxide, OH

Chromium, Total, Cr

5.8 mg/l

Nitrate, N

Copper, Cu

Nitrite, N

Iron, Fe

Organic Nitrogen, N

Magnesium, Mg

Phenol

Manganese, Mn

Ortho Phosphate, P

Oil and Grease

Total Phosphate, P

Potassium, K

Silica, SiO₂

Sodium, Na

29,100 mg/l

Sulfate, SO₄

Zinc, Zn

Sulfite, SO₃

Nickel, Ni

9.1 mg/l

Surfactants

Specific Gravity

1.040

Date 11/15/84

Laboratory Number 841511-2

By J.E.G. III

All tests in accordance with APHA Std. Methods, ASTM Stds. or WOO Methods

TYPICAL CHEMICAL ANALYSIS
OF THE NWPL

<u>Constituent</u>	<u>Concentration (ppm)</u>
Total dissolved solids	92,000 - 130,000
Total suspended solids	1,800 - 3,400
Chlorides, CL	49,000 - 74,000
Carbonate alkalinity (as CaCO_3)	4,880 - 6,480
Bicarbonate alkalinity (as CaCO_3)	2,720 - 3,220
Sodium (Na)	29,000 - 37,000
Nickel (Ni)	5 - 7.5
Chromium (Cr)	31 - 59
Copper (Cu)	0.1 - 1.3
pH	9 - 10
Specific gravity	1.06 - 1.08

GROUND WATER MONITORING PLAN

The permittee shall submit in accordance with §146.13 (b)(4), a plan for monitoring the ground water quality and formation fluid pressure of the first permeable zone immediately overlying the confining layer above the injection zone. This plan must be submitted to the Director for approval no later than 45 days from the effective date of this permit. A schedule of implementation must be included.

The plan must include the following:

- A. A comprehensive report describing the local hydrogeologic framework in which the injection well operates. The report should include:
 1. An interpretation of formation-specific geologic information relating to; a) the adequacy of the confining layer or system, b) the locations and physical characteristics of overlying permeable zones including all USDWs, and c) an evaluation of faulting, fracturing and jointing;
 2. Identification of the proposed monitoring zone and a complete description of methods which will be used to determine aquifer parameters such as permeability, transmissivity and storage coefficient;
 3. An evaluation of the vulnerability to contamination of the lowest USDW; and,
 4. Based on new data developed in items 1 and 2 above, modify or compute the zone of endangering influence as per 40 CFR §146.6.

Specific information should be based on historical and current operating records, research of available geologic literature and/or logs from nearby wells. An evaluation should be made of the reliability of the above information and any data gaps identified. Where adequate information does not exist, it must be supplied by actual measurements.

B. Based on the above information, a monitoring well design and operating plan showing:

1. The number and location of wells designed to: a) detect any leakage of injected fluids above the confining zone; and b) monitor pressure changes by continuous water level recording. A minimum of three (3) wells will be required to define direction of flow; wells should be located as close as physically possible to the injection well.
2. Well specifications, including:
 - a) drilling and development methods
 - b) construction details
 - c) quality assurance plan
 - d) safety plan
 - e) proposed mechanical integrity determination
 - f) step drawdown test to determine well efficiency
 - g) television survey if drilling mud is used
3. A sampling plan, including;
 - a) proposed data to be collected during drilling
 - b) proposed monitoring parameters, including background formation fluid parameters, waste indicator "fingerprint" parameters, and pressure

- c) sample collection procedures
- d) preservation and shipment
- e) analytical procedures
- f) chain of custody control

4. Reporting proposal, including;

- a) initial background survey
- b) quarterly submittal of required data
- c) annual interpretive summary report

Waiver Demonstration

An exemption from ground water monitoring requirements may be granted if the applicant can conclusively demonstrate that there is no potential for fluid movement above the confining zone caused by the injection activity, or that USDW's are completely absent within the area of review. Examples of acceptable exemption criteria include:

- The demonstrated absence of complex geologic structures such as faults; and
- A sufficiently thick confining formation (e.g. 500 feet of clay or shale).
- The potentiometric surface of the injection zone will not exceed the bottom of the lowest USDW.

Where the above criteria cannot be adequately demonstrated, direct measurement of vertical permeability of the confining system may be required.

ATTACHMENT F
CONTINUING RELEASES/CORRECTIVE ACTION

CONTINUING RELEASES/CORRECTIVE ACTION

A. Background

The Hazardous and Solid Waste Amendments (HSWA) of 1984 contain a requirement for corrective action of continuing releases. This provision is established in the new Section 3004(u) of the Act (Section 206 of HSWA). Section 3004(u) requires treatment, storage and disposal (TSD) facilities seeking RCRA permits to take corrective actions for all releases of hazardous waste or constituents from any solid waste management unit (SWMU) regardless of when the waste was placed in the SWMU. In order to fully appreciate the implications of the statutory requirements, the following definitions are made:

- (1) Facility - All contiguous land, structures and other appurtenances and improvements on the land used for treating, storing or disposing of hazardous waste. It includes the entire site that is under the control of the owner or operator engaged in hazardous waste management.
- (2) Corrective Action - As described in 40 CFR §264.100 *now §264.101*
- (3) Releases - Discussed in the preamble to the codification rule, includes any concentration of an Appendix VIII constituent in excess of ground water protection standards where such constituent has emanated from a SWMU. Releases to the air and surface waters are also included. Region V staff believes that releases should be defined at least as broadly as the term is defined in CERCLA
- (4) SWMU - Any contiguous land, structures, other appurtenances, and improvements on the land used for storage, treatment disposal, collection, source separation, transfer, processing,

SWMU - resource recovery or conservation of any solid waste (as defined in 40 CFR §261.2). It includes any unit at the facility from which hazardous constituents might migrate, irrespective of whether the units were intended for the management of solid and/or hazardous wastes.

B. Implementation of Corrective Action

The process of implementing Section 3004(u) will take place in three stages, with each stage consisting of several specific steps, as follows:

1. Preliminary Assessment. Assessment of continuing releases is required for all permits issued after November 8, 1984. If any of the requested information has been previously submitted to the Director, include the original source as a reference on the copy provided in the required report. The permittee is required to submit the following information to the Director on or before November 8, 1985. Failure to submit the required information or falsification of any submitted information is grounds for the termination of this permit (40 CFR §144.40). All information submitted must be certified as required by 40 CFR §144.32.
 - a. Topographic Maps - Provide map(s) showing the facility and a distance of 1,000 feet around the property line at a scale of one inch equal to not more than 200 feet. In addition to showing the location of the permitted hazardous waste facility and management units, the permittee must locate on the map each existing and former solid waste management unit (SWMU), regardless of its permitting status.
 - b. Description of Units - For each SWMU, provide a history of construction, including engineering drawings, foundations, materials of construction, dimensions, capacity and ancillary systems. Include location, design, construction, and description of all monitoring systems (air, surface water, ground water, etc.). If the SWMU is not in use, describe the methods utilized to close the facility and all construction related to closure.
 - c. Description of Operation - For each SWMU, provide a history of the unit's function and all of the wastes processed or

disposed of at the unit. Include the hazardous waste constituents processed or disposed of, the time frames of operation, and quantities handled during those time frames.

- d. Description of Releases - For each SWMU, describe any release or potential release originating at each SWMU. Include the suspected date of release, the type of hazardous waste or hazardous waste constituent, the quantity released, the environmental media affected, the nature of the release and present migration, and the circumstances and cause of the release. Provide any available data which would quantify the nature and extent of any environmental contamination including the results of air, soil, surface and ground water sampling and analysis. Provide any available data which would indicate that no releases are present, if applicable.

2. Remedial Investigations and Corrective Action Plan Development. If hazardous wastes or constituents have been released, no later than six (6) months after the effective date of this permit, the permittee shall conduct remedial investigations, develop a proposed corrective action plan, and submit a report on the investigations to the Director as follows:

- (a) Site investigation, including but not limited to, hydrological data, both surface and subsurface sampling, and identification of background prior to contamination;
- (b) Remedial investigations by owner/operator to identify/characterize releases;
- (c) Develop an appropriate proposed corrective action plan and cost estimate; and
- (d) Provide a financial assurance mechanism to cover the cost of implementing the corrective action plan.

3. Corrective Action Plan Implementation. Within thirty-six (36) months after the Director's approval, the permittee shall implement the corrective action plan as follows:

- (a) 6 months after approval - Complete engineering design;
- (b) 6 months after approval - Prepare contract documents and award construction bids or equivalent in-house action.
- (c) 18 months after approval- Complete corrective action plan

C. Permit Modification

The Director may modify this permit to include additional requirements or modify the Schedule of Compliance as appropriate in accordance with 40 CFR §270.41 and Section 212 of HSWA. If major permit modification is needed, USEPA will publish a public notice and allow for public review and comment.